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Development of validated analytical method for risperidone in pharmaceutical solid dosage form by HPTLC

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A simple, sensitive, precise, accurate and specific high performance thin layer chromatographic (HPTLC) method has been developed and validated for estimation of risperidone in solid dosage form. The stationary phase used was precoated silica gel 60F254 plate. The mobile phase used was acetonitrile: triethylamine (5:0.2 v/v). The detection of spots was carried out densitometrically using a UV detector at 279 nm in absorbance mode. This system was found to give compact spots for risperidone (Rf value of 3.5±0.02). The method was validated in terms of linearity, accuracy, precision, limit of detection, limit of quantification and specificity according to the International Conference on Harmonization guidelines. The calibration curve was found to be linear between 100-700 ng/spot for risperidone, with significantly high value of correlation coefficient (r2>0.99). The percent average recoveries obtained were 99.45±0.34 for risperidone. The limits of detection and quantitation were found to be 46.56 ng/spot and 141.11 ng/spot for risperidone. The developed method was successfully used for the assay of risperidone from solid dosage form without interferences of excipients. The proposed method was found to be repeatable; hence it can be used for the routine quality control testing of risperidone in solid dosage form.

Biography

Sunil Singh has completed his MPharm at the age of 23 years from College of Pharmacy, IPS Academy, Indore and is pursuing PhD from Department of Pharmacy, Mewar University, Chittorgarh, Rajasthan, India. He has published more than 38 papers in reputed journals and serving as a reviewer of repute.

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